



# CQSDI 2000



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NASA Failure Detection and Prevention Program:  
Risk Identification and Management Tools -  
Risk Balancing Profiles (RBP)  
Defect Detection and Prevention (DDP)

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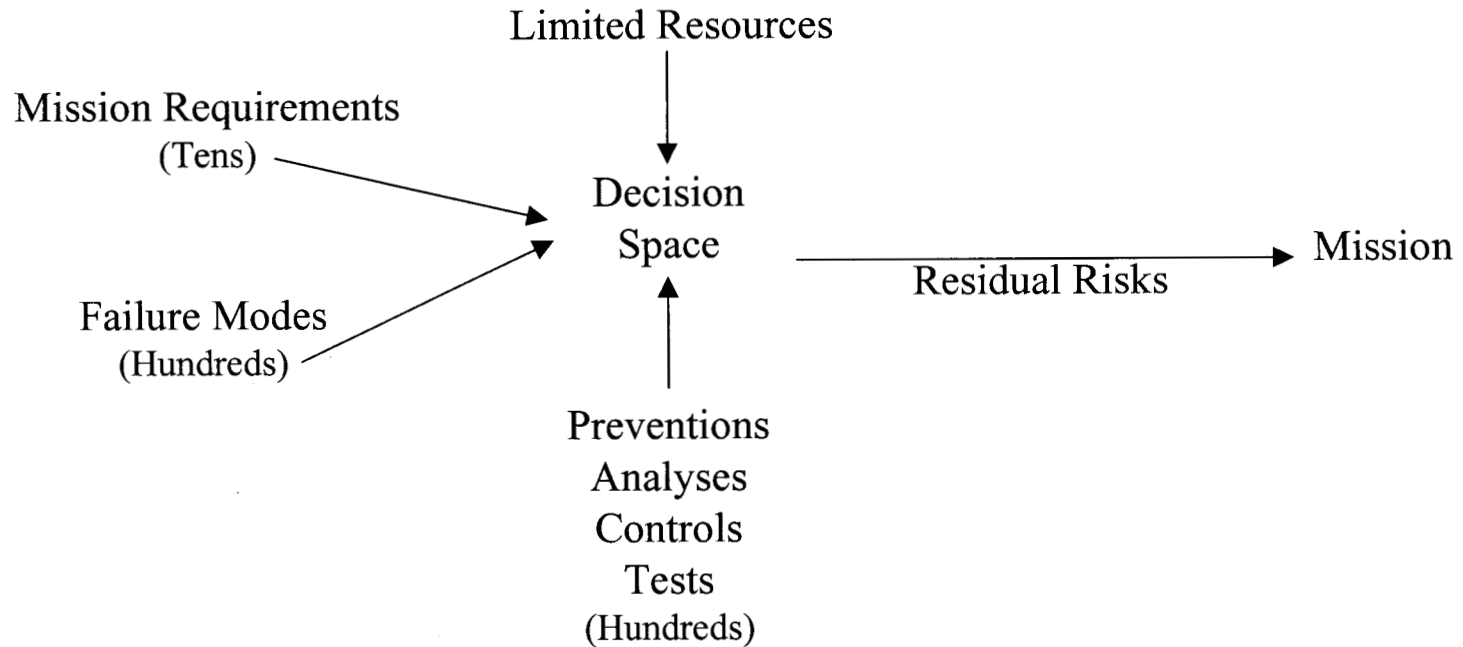
# FDP Program



- Failure Detection and Prevention Program (FDPP) - new program begun in FY99, funded by NASA Office of Safety and Mission Assurance (Code Q)
- Jointly performed between JPL, GRC, GSFC
- Goal is to develop tools that will aid in the identification and management of technical risk
- Developing three primary tools/products:
  - Risk Balancing Profiles
  - Defect Detection and Prevention (DDP) Tool
  - Assurance Effectiveness Guidebook
  - *These tools will be combined into one tool by Sept. 2000*



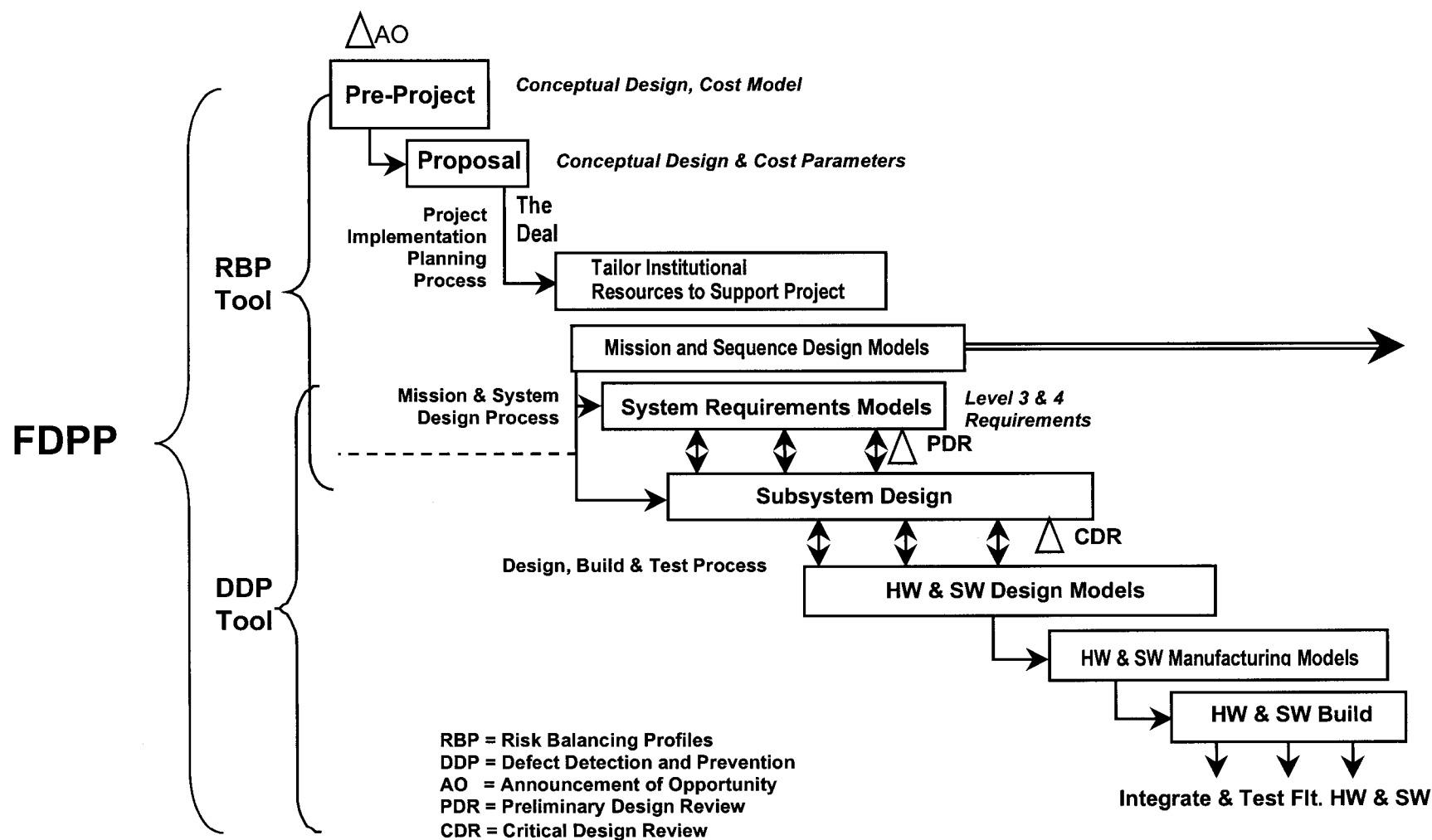
# The Challenge



- The Challenge
  - » With limited resources, how is a balanced risk management approach selected to control the residual risk to mission success caused by the presence of known potential failure modes?
- The Approach
  - » Develop tools which address residual risk as a function of various risk control options. Options exist at the planned activity level and in the degree to which potential failure modes are addressed



# FDPP and the Project Life Cycle





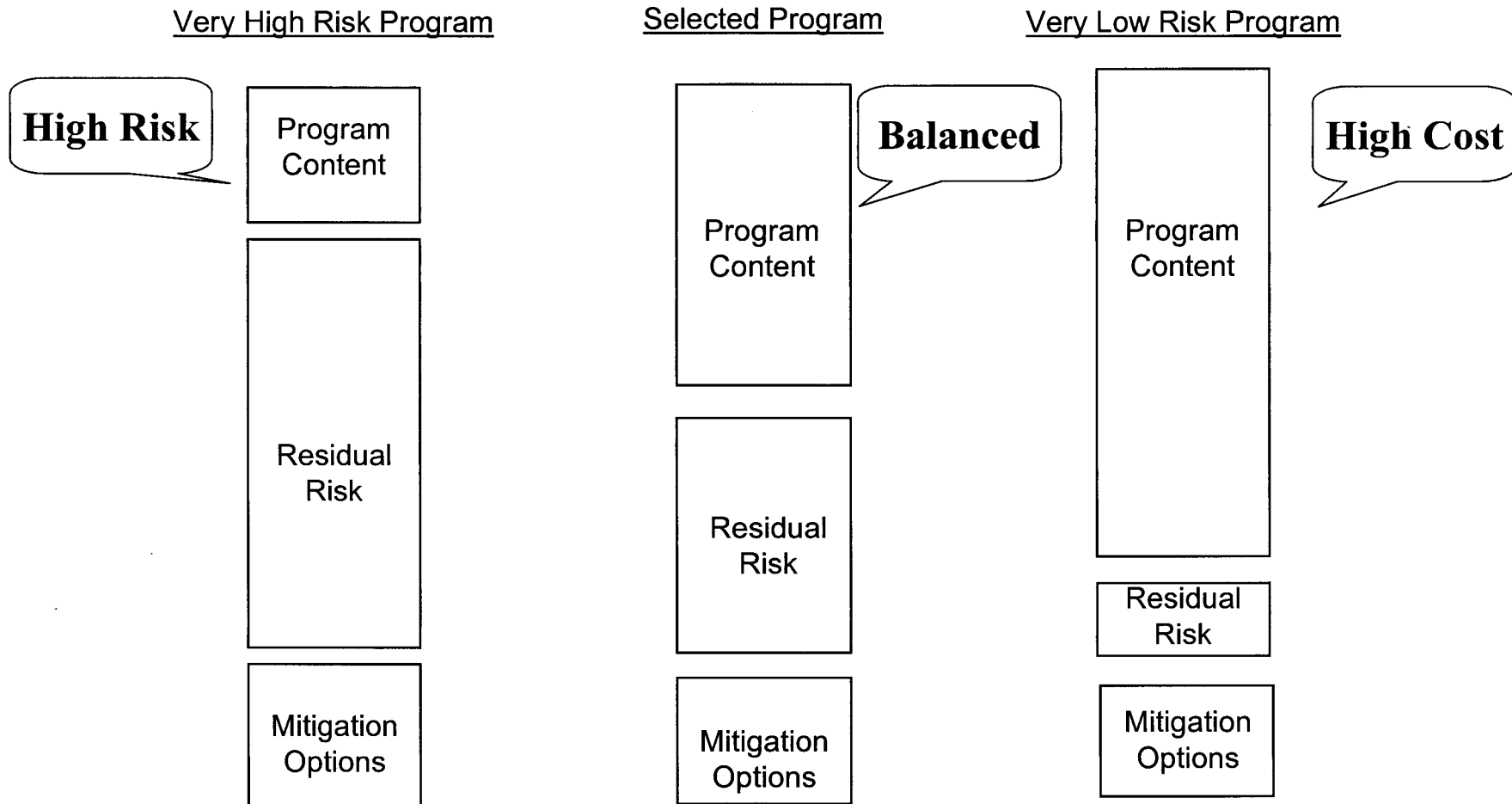
# Risk Balancing Profiles



- A tool that aids in the development of assurance program plans
- Provides a mechanism for identifying technical performance risk associated with program content
- Aids in identifying mitigation possibilities corresponding to residual risk
- Assists assurance program planning by:
  - enabling the identification of specific risk areas correlated to the chosen program content
  - identifying areas to be discussed with subject experts to further refine program
  - resulting in rationale for chosen program content and accepted risk
  - providing a tool to balance risk and resources rationally



# RBP - The Problem:





## Contact Information



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